COURSE DATA

DATA SUBJECT

Code: 46461
Name: Advanced Research Skills
Cycle: Master's Degree
ECTS Credits: 6
Academic year: 2026-27

STUDY (S)

Degree	Center	Acad. year	Period
2248 - International Joint Research Master Work and Organizational Psychology	Facultat de Psicologia i Logopèdia	2	First quarter

SUBJECT-MATTER

Degree	Subject-matter	Character
2248 - International Joint Research Master Work and Organizational Psychology	Advanced research skills	COMPULSORY

COORDINATION

GONZALEZ ROMA VICENTE

SUMMARY

As a natural science, Psychology produces knowledge about natural objects and phenomena (e.g., how memory works and some stored information can be retrieved). However, as an artificial science (Simon, 1996), Psychology also creates knowledge about artificial objects and phenomena (e.g., how and why an intervention program aimed to reduce job stress works). Some of these artificial phenomena that are relevant for WOP-Psychology are intervention programs aimed to improve organizational performance and employee well-being. In order to promote evidence-based practice, it is crucial for our discipline to generate rigorous and solid scientific knowledge about the effectiveness of the aforementioned intervention programs. Thus, researchers and practitioners will be able to make sound decisions about the most appropriate interventions under varying environmental and organizational conditions. Moreover, as an applied science, our discipline needs more methodologically rigorous investigations designed to evaluate the effectiveness of interventions implemented in work environments.

Moreover, to be fully useful, psychological scientific knowledge must be shared. One way to share it is by publishing research outcomes in scientific journals. Thus, once a given investigation is finished, researchers write a manuscript in which they report the results obtained and submit it to a scientific a journal. Therefore, it is also important to know the tasks, procedures, and decisions involved in the process of writing and submitting a scientific manuscript.

PREVIOUS KNOWLEDGE

RELATIONSHIP TO OTHER SUBJECTS OF THE SAME DEGREE

There are no specified enrollment restrictions with other subjects of the curriculum.

OTHER REQUIREMENTS

No previous requirements.

COMPETENCES / LEARNING OUTCOMES

2248 - International Joint Research Master Work and Organizational Psychology

Be able to analyse, evaluate, interpret and synthesize research methods, data, theories and publications in the field of work and organisational psychology.

Be able to apply theories, interventions, instruments and evaluation methods to practice in the field of work and organisational psychology.

Be able to communicate scientific theories and empirical results in an understandable manner, to both professionals (experts and non-experts) and lay audiences (including clients).

Be able to design and conduct quality scientific research in the field of work and organisational psychology (including the abilities to select and apply appropriate research and statistical methods).

Be able to make a critical assessment of a research question and an experimental design, taking into account the ethical responsibilities in research.

Be able to read, understand, integrate and critically reflect on scientific communications, professional reports and new developments.

Be able to reflect on one's own professional behaviour and development (including ethical considerations and obligations).

Be able to write scientific reports in the form of practical reports, master's theses and/or scientific publications following scientific standards.

DESCRIPTION OF CONTENTS

1. Quasi-experimental designs for evaluating interventions in organizations

1. Introduction to Quasi-experimental designs to assess intervention effectiveness
1.1. Basic concepts
1.2. Types of quasi-experimental designs

1.3. The use of quasi-experiments in organizational research (from planning to reporting)
2. Designs and statistical analysis for quasi-experimental research
2.1. Pre-experimental designs: T tests
2.2. Pretest-Posttest with control group(s): ANOVAs and ANCOVAs
2.3. Regression Discontinuity
2.4. Time series: ARIMA models
For each design and statistical technique we will provide examples, propose hypotheses, introduce the statistical assumptions, show how to run the analysis, and interpret the results about the effectiveness of the intervention (null-hypothesis test, effect size, threats and generalization)
3. Evaluating and reporting quasi-experimental research: effectiveness of interventions
3.1. Criteria checklist for reviewing and evaluating experimental and quasi-experimental designs
3.2. Reporting: causal inferences, validity threats and generalization.

2. Mediation analysis for intervention research

A. Foundations
1. Mediation in intervention research
2. Mediation designs for intervention research
3. Methods for mediation: an overview

3.1. Baron & Kenny¿s procedure & problems
3.2. Current methods and approaches in WOPP
4. Effect size measures in mediation research

B. Implementation with Mplus
1. Introduction to Mplus
1.1. Preparing the input file
1.2. Creating the syntax file
2. Simple mediation models with Mplus
3. Testing the statistical significance of the indirect effects with Mplus
3.1. Using bootstrapping
3.2. Using Monte Carlo
4. Estimation of effect size measures in mediation models
5. Parallel mediation models with Mplus
6. Evaluating and reporting results of mediation models in interventions

3. Publishing and the process involved

1. Why is it important?
2. Journal selection
3. General recommendations
4. Style

5. Writing the empirical article
6. Before submitting the manuscript
7. The review process
8. Handling and responding to reviews
9. After getting the paper published

Guided examples will be provided and individual and group exercises will be proposed to cover the aforementioned contents.

WORKLOAD

PRESENCIAL ACTIVITIES

Activity	Hours
Theoretical and practical classes	60,00
Total hours	**60,00**

NON PRESENCIAL ACTIVITIES

Activity	Hours
Attendance at other activities	0,00
Individual or group project	0,00
Independent study and work	0,00
Preparation of lessons	90,00
Preparation for assessment activities	0,00
Resolution of case studies	0,00
Total hours	**90,00**

TEACHING METHODOLOGY

The main teaching methodology will be centered on active learning activities. The following teaching techniques will be used:

¿ Reading, analysis and discussion of published research articles. The selected materials will stress the multicultural perspective by reading articles in different cultural contexts.

¿ Oral presentations by the teacher.

¿ Oral presentations by the students.

¿ Guided exercises that focus on databases which include variables related to organizational interventions.

¿ Individual and group exercises (problem solving, individual tutoring and group tutoring).

EVALUATION

The evaluation will consist of several activities plus an exam.

1. Continuous assessment activities

Several activities will be proposed to enhance the knowledge and research skills related to the different topics of the course. These activities will consist of:

a) paper readings and discussions;

b) statistical analyses for different intervention designs and mediational analyses and c) interpretation of results

These activities will constitute a maximum of 10% of the mark. To obtain the maximum scores, students must do ALL the activities and participate in their correction in the classroom.

A detailed description of each activity and its deadline will be provided by each instructor.

2. Exam

A practical case of an organizational intervention and the corresponding data base will be provided. Students will have to identify the best quasi-experimental design to determine the effectiveness of the intervention presented in the case, run the statistical analysis that match the design and interpret the results. In addition, students will test the specific mediation mechanisms proposed to explain the effectiveness of the intervention and interpret the results.

The exam will constitute 90% of the mark

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